



**OPERATIONAL CHALLENGES AND FIRM COMPLIANCE IN CASSAVA
OUTGROWER CONTRACT: INSIGHTS FROM AGBEYEWAW AGRO-FIRM AND
FARMERS IN EKITI STATE, NIGERIA**

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ABSTRACT

Compliance with contractual obligations is a critical concern in the success of outgrower schemes. However, existing data tends to focus on participating farmers (outgrowers) compliance while the commitment of the firm managing the scheme is paid less attention. This study is an attempt to bridge this gap by focusing on operational challenges and firm (Agbeyewa agro-firm) compliance with its contractual obligations, focusing on a private sector-led cassava scheme in Ekiti State, Nigeria. Data was sourced from 250 outgrowers and representatives of the firm using a combination of questionnaire and interview guide. Data analysis was accomplished with frequency distribution, mean as well as Friedman tests. Findings showed close to 50% of the respondents had 6-10 years' experience of cassava farming, operated on small-scale (average farm = 1.1ha), and most have participated in the scheme for about 3 years (82.4%). Significant ($\chi^2=68.67$; $p \leq 0.05$) differences was reported by outgrowers in Agbeyewa firm's compliance with its contractual obligations in the scheme with "training of famers on improved farm practices" (mean rank=6.15) being the most significant while the least was "supply of the agreed quantity of farm inputs to farmers by the firm" (5.79). The farmers acknowledged some challenges in the operations of the scheme including delayed input supply, irregular visits by outgrowers' managers, inadequate tractors for land preparation, and delayed harvesting of mature tubers. It was concluded that the firm demonstrated high compliance with the contract agreements. However, there is room for improvements based on the afore-mentioned challenges. The study recommended that the agro-firm step up its monitoring of famers, improve upon its communication strategies, and ensure timely input supply and prompt harvesting of farmers produce.

Keywords: Cassava, Outgrower-scheme, Contract, Farming, Compliance, Nigeria.

INTRODUCTION

Cassava (*Manihot esculenta*) is an important staple crop in Nigeria and serves as a primary source of food security and industrial raw material. Data revealed that Nigeria remains the world's largest producer of cassava. Annual cassava output in the country is estimated at over 60 million metric tons and is a major contributor to domestic consumption and industrial derivatives such as starch, flour, and ethanol (Chiaka *et al.*, 2022; FAO, 2023). The importance of the crop is tied to its adaptability to different agro-ecological zones. Moreover, its role in rural livelihoods makes it indispensable, particularly in southwestern states like Ekiti, where smallholder farming is largely practiced (Ekiti State Government, 2024). Despite its prominence, the cassava sector is faced with serious challenges, including low productivity, post-harvest losses, limited access to improved varieties, and inadequate market linkages, all of which hinder the full exploitation of its economic potential (Asiedu & Okafor, 2018; Musa *et al.*, 2022).

Many authors have pointed out that outgrower schemes, also known as contract farming, are key to addressing the above constraints because they link smallholder farmers to agribusiness firms through formal agreements. These schemes usually involve firms who provide farmers (outgrowers) with inputs, technical assistance, extension services, and guaranteed markets in exchange for their



(farmers') commitment to supply produce at a pre-agreed terms such as quantity and quality (Bellemare & Novak, 2017; Glover & Kusterer, 2016). Those who proposed this scheme argue that such schemes combine the advantages of smallholder need and family labor with a firm resource in terms of quality control, technology adoption, and market access, which thus positions them as an alternative to large-scale plantations (Prowse, 2018; Vermeulen & Cotula, 2018). Such schemes are also designed to overcome market failures by providing smallholders with the resources necessary to participate in higher-value supply chains. In Nigeria, the expansion of these schemes is a necessary if the agricultural value chain is to be modernized and food security enhanced. Empirical evidence shows that the schemes did have positive impacts on farmers such as higher incomes, improved productivity, and enhanced welfare for the outgrowers (Bellemare, 2018; Bolwig *et al.*, 2019; Cahyadi & Waibel, 2016; Narayanan, 2014). Other benefits of the schemes include knowledge transfer, provision of farm resources, and a ready or guaranteed market (Clausen *et al.*, 2017; McIntyre *et al.*, 2017; Sumberg *et al.*, 2018).

In Nigeria, cassava outgrower schemes are becoming popular as efforts, by government and non-governmental bodies, are made to industrialize the value chain and reduce the nation dependence on import on starch and related products. Usually, the outgrower schemes are operated via centralized or nucleus-outgrower structures, where the firms give farmers inputs and provide mechanization while ensuring that the farmers adhere to production (Fadairo & Alarape, 2020). For instance, private-led schemes like those of Psaltry International in Oyo State show how centralized outgrower models can help smallholder farmers enhance productivity through provision of extension service and inputs (Alarape & Akanbi, 2021). Also, Agbeyewa Agro-firm in Ekiti State operates a centralized outgrower model, in which it partners with cassava farmers. In its Memoranda of Understanding, the firm supply improved varieties, tractor services, and agronomic support to farmers, while it is committed to offtake the output and also ensure timely payments. This firm is a subsidiary of Cavista Holdings, and has expanded its operations rapidly, cultivating thousands of hectares and partnering with clusters of smallholder farmers. Despite the benefits associated with outgrowers scheme, they are faced with several challenges, such as power imbalances between the firm and farmers, risks of debt, exposure to market price volatility, and exclusion of vulnerable farmers due to participation requirements such as ownership of specific farm size (Córdoba *et al.*, 2018; Donovan & Poole, 2017; Pegler, 2015). In the context of cassava crop, issues like delayed input supply, irregular extension service delivery, and logistic constraints often undermine the effectiveness of outgrowers scheme (Li & Wang, 2024; Mishra *et al.*, 2022).

The sustainability of these outgrower schemes is based on contractual compliance by the parties involved, i.e., the firm and the farmers. Compliance refers to the degree to which both the outgrower and the managing firm adhere to the obligations stipulated in their agreement. For the firm, compliance involves its timely delivery of inputs such as fertilizers, improved stems, and the provision of mechanical operations such as ploughing, harrowing, and ridging, at reasonable fees to the farmers. It also includes the provision of agronomic support and ensuring prompt payment for produce delivered by farmers. Conversely, for the farmer, compliance entails adhering to strict production technical guidelines, including proper plant spacing and the application of recommended chemicals, as well as the delivery of the harvest to the firm and not engage in side-selling.

Existing studies in Nigeria have looked at farmer participation, productivity gains, and welfare effects in outgrowers' schemes like Psaltry or other cassava initiatives (Abegunde, 2021; Fadairo & Alarape, 2020; Obi-Egbedi *et al.*, 2022). However, there is a lack of empirical focus on compliance and operational commitment of farmers as well as the firm managing the scheme. This is important because contractual failures associated with the firm, such as delayed payments or the failure to provide inputs promised to farmers, are often the major drivers of farmer dissatisfaction with the scheme and abandonment of stipulated contract or non-compliance with contract terms (Nguyen *et al.*, 2015). Most studies emphasize outgrowers' compliance with the scheme obligations and overlook how agribusiness firms fulfill its commitments such as timely input delivery, extension support, mechanization, and prompt harvesting/payments, all of which are important to mutual trust and the sustainability of the scheme (Nguyen *et al.*, 2015; Repar *et al.*, 2018). This gap is seen in recent private-led schemes like Agbeyewa Agro-firm's in Ekiti State, where operational challenges may affect firm performance and



farmer retention in the long run. There is also a scarcity of empirical evidence that examines operational challenges from both firm and farmer perspectives within a single cassava outgrower scheme, particularly in Ekiti State, Nigeria. This study, therefore, seeks to bridge this gap by examining the operational challenges and the level of compliance of Agbeyewa agro-firm with regards its cassava outgrower scheme in Ekiti State, Nigeria.

This study assessed the firm compliance and operational challenges faced in the private sector-led cassava outgrowers scheme with focus on Agbeyewa agro-firm in Ekiti State, Nigeria. The specific objectives are to:

- examine the agro-firm compliance with the terms stipulated in the outgrower scheme contract agreement.
- examine the challenges faced by the actors (farmers and firm) involved in the cassava outgrowers' scheme.

METHODOLOGY

Study Area

Area of study: The study area was Ekiti State, located in southwestern region of Nigeria. The land area spread across 5887.890km², located between Longitudes 40°51' and 50°451' East of the Greenwich meridian and Latitudes 70°151' and 80°51' North of the Equator. (Ekiti State Government, 2024). The 2025 projected population, from its 2006 figure of 2,398,957 (NPC, 2010), is 4,331,587 (NPC, 2010). Administratively, the State is divided into 16 Local Government Areas (LGAs), distributed across 3 senatorial districts - Ekiti central, Ekiti south and Ekiti North. The state lies in the forest-savanna transition zone of southwest Nigeria. The tropical rainforest zone is found in the southern part of the state while the derived savanna is found in the northern zone. The forest vegetation zone is home to different indigenous tree species, including iroko, mahogany and obeche (Agbelade & Fagbemigun, 2015).

Sampling Techniques and Sample Size

A 250-sample size was targeted based on the sample size table of proportion (Althubaiti, 2022) and an outgrower population of 400 representing the total cassava farmers registered with the firm cassava outgrower scheme. A multi-stage sampling approach was adopted. The first phase involved the purposive selection of the three LGAs where the outgrower farmers' clusters are located, to ensure the views of all were captured in this study. According to data from the agro-firm, the scheme has 40 outgrowers/farmer clusters with 10 farmers in a cluster. These clusters are distributed across 3 LGAs in the State namely, Ikole (20), Moba (10) and Oye (10). The second phase of sampling involved the random selection of 60% of the clusters in each LGA, to give 24. The third and last phase was the proportional random sampling by size to select the 250 target outgrowers from the different clusters or LGAs (see below **Error! Reference source not found.**).

Table 1: Sampling Framework for Outgrowers

LGA	Stage 1	Number of farmers	Stage 2	Stage 3
	Number of Clusters/ LGA		Sampling of Clusters (60%)	Total sample
Ikole	20	200	12	125
Moba	10	100	6	63
Oye	10	100	6	63
Total	40	400	24	251

Method of Data Collection

Primary data were used for the study and was obtained through both quantitative and qualitative methods. Primary data was sourced from farmer participants in the outgrowers' scheme as well as staff of Agbeyewa agro-firm, the firm operating the cassava scheme being investigated. Quantitative data from respondents were obtained using pre-tested and validated interview schedule and questionnaire. In addition, Key Informant Interview were conducted with 4 staff of Agbeyewa Agro-firm and heads



of each cluster across the 3 LGAs. These interviews allowed for in-depth exploration of issues that might not be fully captured through the questionnaire alone. Data instruments were administered on respondents by the researchers with support from trained enumerators.

Method of Data Analysis

The research used descriptive statistics, which included tables and summaries of data in form of means, frequency and standard deviations. Additionally, inferential statistic (Friedman test) was also used to test the stated hypothesis.

Measurement of Variables:

The key variables were operationalized as follows:

- a. The outgrowers' perception of the agro-firm compliance with its contractual obligations in the scheme was measured on a 4-point Likert type scale as follows: High (comply with all the time) (coded 4); Moderate (implement or comply sometimes) (coded 3); Fair (I implement sometimes) (coded 2); and low (did not comply at all) (coded 1). To determine the point of compliance, a threshold of 2.50 was used; thus, a mean score of ≥ 2.50 means the outgrowers agreed that the firm complied with the obligation or otherwise if < 2.50 .
- b. Challenges to compliance with contract terms: The respondents were asked to rate the challenges to compliance with contract terms using a 4-point Likert scale rated as follows: Very serious (coded 4); Serious (coded 3); little serious (coded 2); and 'not serious' (coded 1). To determine the seriousness of each constraint, the benchmark mean of 2.50 was used, such that any constraint with a mean score of 2.50 and above equals 'serious' or otherwise if less than 2.50.

RESULTS AND DISCUSSION

Background Information of the Respondents

The results in Table 2 revealed that almost half (49.6%) of the respondents had 6–10 years of cassava cultivation experience, while 32.4% had 11–15 years, with the average experience of 10 years, reflecting an experienced group of farmers. Experienced farmers may perform better in an outgrower scheme, as it confers deeper understanding of the production process. This result is supported by Abegunde (2021), who reported that farming experience positively influences farmers' compliance with contract obligations and productivity in an outgrower scheme.

The results also revealed that most respondents (91.2%) operated farming as their primary livelihood, with 8.8% having non-farm primary engagements. The high number of full-time farmers in the outgrowers' scheme suggests that these farmers are likely to dedicate much time and resources to meeting their production obligations. This observation agrees with Abegunde (2021) report that farmers involvement in farming on full-time basis significantly influences their participation and performance in outgrower schemes.

In addition, the results from Table 1 indicated that 53.2% of the respondents cultivated 1ha or less under the Agbeyewa cassava outgrower scheme, with the mean farm size being 1.10ha while few (1.6%) cultivated over 3ha. These findings suggest the scheme predominantly engages smallholder farmers, which is consistent with the general trend of small-scale farming in Nigeria. The Nigerian agricultural system is dominated by small-holders whose farms are 2 ha or less (Chiaka *et al.*, 2022). Such land size limit output and ability of outgrowers to leverage the scheme resources. However, this situation also imposes on the agro-firm the need to ensure its outgrowers are supported with the requisite inputs to enhance productivity, regardless of the size of the farm.

Furthermore, the results showed that majority (82.4%) of the respondents registered with the Agbeyewa outgrower scheme in 2023, implying they have been with the scheme for about 2 years, 14.40% for the first year and very few (3.2%) for 3 years (since 2022). This highlights the relativeness of the scheme, with most outgrowers registering in their second year of operation. According to Tuyen *et al.* (2022), the early years of an outgrower scheme is important if we are to build trust and align expectations between farmers and firms. What this means for the agro-firm is that its outgrowers were still evaluating its performance and compliance with its obligations to farmers. It is imperative therefore that it operates the scheme in accordance with the stated agreement and with



regular engagement with the farmers, if it hopes to sustain their interest and scale farmer registration in the scheme.

Table 2: Socio-economic Characteristics of the Respondents

Characteristics	Options	Freq	%	Mean
Cassava cultivation experience (years)	1-5	24	9.60	10
	6-10	124	49.60	
	11-15	81	32.40	
	16-20	17	6.80	
	> 20	4	1.60	
	Total	250	100.00	
Farm size operated for the outgrowers' scheme (ha)	1ha & below	133	53.20	10
	1.1-1.5ha	43	17.20	
	1.51-2.0ha	47	18.80	
	2.1-2.5ha	11	4.40	
	2.6-3.0ha	12	4.80	
	above 3ha	4	1.60	
Major occupation (farming)	No	22	8.80	10
	Yes	228	91.20	
	Total	250	100.00	
Outgrowers' scheme experience (registration) with Agbeyewa firm	2024 (one year)	36	14.40	10
	2023 (2 years)	206	82.40	
	2022 (3 years)	8	3.20	
	Total	250	100.00	

Source: Field survey, 2025.

Farmers' Perception of Agbeyewa Agro-firm Compliance to Contract Terms

Table 3 provides insight into the respondents' perception of Agbeyewa Agro-firm's compliance with its contract obligations under the cassava outgrowers' scheme. Findings revealed high compliance across the listed contractual obligations, as all mean scores above the threshold of 2.50. In addition, the low standard deviation values (ranging between 0.1 and 0.3) suggest that there is strong agreement among the respondents regarding the firm's compliance with its obligations. The compliance item with the highest rating was *"training of farmers on improved cassava production practices"* (mean = 4.00), reflecting the firm's high commitment to providing farmers with essential knowledge and skills to enhance cassava production. Similarly, the firm's *"monitoring of farm operations and provision of agronomic support"* was rated very high (mean = 3.99), suggesting the firm ensures adequate supervision and guidance to help farmers adopt and maintain best practices on their farms.

Interview sessions with key informants from Agbeyewa firm indicate a consensus or agreement with the farmers response. According to key informants, the firm complies with all the stipulated contract terms, rating the firm's compliance as 'high' for all the stipulated contract terms. The key informant further explained the reason for this, *"the company does its best to comply to the contract agreements in order to encourage the farmers to also comply with theirs. The company recognizes that if it does not do so, the famers are not likely to also comply, and this will impact on its business goals."* High compliance, particularly in areas such as training, input delivery, and prompt payment, enhance farmers' satisfaction, and encourage their long-term involvement. However, areas with slightly higher variability, such as the timely supply of inputs, reveal opportunities for improvement. Abegunde (2021) and Tuyen *et al.* (2022) corroborate these results, emphasizing that none or limited compliance with contractual obligations, such as delayed input delivery or payments, can erode farmers' confidence and undermine the success of outgrower programmes.



Table 3: Respondents' Perception of Agbeyewa Agro firm Compliance with its Contract Terms

Contract terms for Agbeyewa agro firm	Mean	SD
Training of farmers on improved cassava production practice	4.00	0.1
Monitor farm operations and provide agronomic support	3.99	0.1
Provide mechanical operations (ploughing, harrowing and ridging) based on farmers need at a reasonable fee	3.99	0.1
Provision of information on improved cassava production practices	3.98	0.2
Provide agronomic support or experts for best practices, field activities, and crop management techniques	3.98	0.1
Deduct farm inputs cost at harvest time	3.98	0.2
Purchase of produce at agreed price	3.97	0.2
Supply/delivery of quality farm inputs	3.95	0.2
Prompt payment for produce delivered	3.94	0.2
Timely supply of inputs (chemicals, improved cassava stem)	3.94	0.2
Supply of agreed quantity of farm inputs	3.93	0.3

Complied/Agreed (mean ≥ 2.50)

Agbeyewa Staff Perception of Farmers Compliance with Contract Terms

The key informants also revealed that the participating farmers generally complied with the contract terms in the scheme contract, howbeit, in different degrees. They rated farmers compliance with the following contract agreement as 'high' – Apply farm chemicals (herbicides/ fertilizers) on your farm, Plant improved cassava stems on your farm, supply cassava tubers of 25 t/ha to Agbeyewa firm on harvest, adherence to plant spacing/plant population per hectare. The informants rated farmers compliance with the following obligations as fair - Supply cassava tubers to Agbeyewa agro-firm in the right quality, complete harvest not later than 16 months after planting, strict adherence to all technical guidelines of best practice, no diversion of farm inputs, no side selling of harvested output (cassava), and seek technical advice from Agbeyewa agro-firm when needed. This high compliance was attributed to the mutual understanding and trust built between the farmers and the agro-firm. The fact that the firm believes its outgrowers are committed to the terms of the scheme will further encourage investment scaling on its part.

Challenges Faced by Farmers in the Agbeyewa Outgrowers' Scheme.

Interview sessions with key informants (farmer cluster/cluster leaders) revealed the following concerns about the Agbeyewa cassava outgrowers' scheme.

- Delayed supply of inputs by the firm: they explained that sometimes, the firm delays in the supply of inputs to farmers which prevented farmers from embarking on production in a timely manner.
- Irregular visits by the Agbeyewa firm outgrowers managers (extension agents). The farmers believed these inconsistent visits did not allow the Scheme managers to spot deviations from the approved guidelines or identify farmer field challenges for prompt redress. It equally denied farmers the learning opportunities associated with such visits which may impact their capacity to maximize production. Li and Wang (2024) observed similar challenge of farmers in outgrower schemes, noting that insufficient training and sluggish diffusion of information immensely undermines the success of the scheme.
- Inadequate tractors for land preparation, which cause delayed planting
- Delayed tuber harvesting by the firm. Informants explained that this causes delay in payment to farmers and subsequently affected their welfare. The farmers admitted that late payments interfered with their cash flow and planning for the next farming seasons. However, they did not consider this a strong disincentive to continue with the scheme. This was contrary to observations by Nguyen *et al* (2015), who noted that delayed payments under contract farming schemes cause low compliance and undermine the viability of such programmes.

Some of the above challenges are aligned with those reportedly associated with contract farming. According to Mishra *et al.* (2022), Fathelrahman *et al.* (2017) and Kariuku and Loy (2016),



some major challenges faced by farmers involved in a contractual relationship with agro-firms were lack of flexibility to market changes e.g. in price and delayed payments for produce supplied.

Key informants (staff) engaged at the agro-firm revealed some challenges they face working with the farmers in the scheme. According to them, the major challenges faced were related to communication barriers, trust issues, inconsistent commitment to the contract, geographical dispersal and financial illiteracy. These are explained below.

- a. Communication/language barriers: the concerns border on language, literacy, and culture. Communication and mutual understanding are critical to farmers understanding of contractual terms, suggested agronomic practices, and company expectations. The different literacy levels of farmers lead to misunderstandings or poor comprehension of contractual terms or expectations, which invariably causes variations in its implementation by farmers.
- b. Trust issues: informants explained that farmers sometimes were hesitant to fully commit to the firm contract due to skepticism or negative experiences with past contract farming arrangements with other agro-agencies. Mistrust could lead to farmers hesitation to adopt recommended agronomic practices or fully committing to contractual agreements.
- c. Inconsistent compliance by farmers with contract terms e.g., adopting recommended farm practices. Farmers' compliance with some contractual obligations is subject to several factors, such as financial constraints, personal issues, and other market alternatives. A few outgrowers could be influenced by these factors to satisfy short-term financial needs at the expense of long-term contractual commitments, which may result in side-selling of inputs or delayed fulfillment of contractual terms. These inconsistencies impact negatively on the firm's production planning, coordination of supply chain, and may undermine the efficiency of the outgrowers' scheme.
- d. Financial illiteracy: Most outgrowers lack the knowledge of financial management or skills needed to make sound economic decisions. Poor understanding of cost structures, pricing models, and contractual terms could influence the farmers' capability to maximize earnings or reinvest in their farms.
- e. The geographical spread of the farmers also constitutes a logistic problem for the company.

The outgrowers under the firm scheme are scattered in different locations (communities), some of which are remote, increasing transaction costs for the company. Their distances also make regular monitoring, training, and support services difficult. Constraints related to distance led to delayed communication and logistic inefficiencies, especially in the delivery of inputs, training sessions, and compliance checks. It also hindered quick response to emerging problems, exacerbating inefficient coordination of the scheme.

The above issues aligned with the challenges agro-firms in a contractual relationship with farmers' encounter. According to Mishra *et al.* (2022) and Repar *et al.* (2018), these include delayed delivery of output or hold-up problems, and less quantity of output.

Differences among the Outgrowers' Perception of the Contract Terms Complied with by Agbeyewa Agro-firm

Friedman test was used to determine if significant differences across compliance obligations of the firm, based on the outgrowers perception. The result ($\chi^2 = 68.67$; $p \leq 0.05$) was significant, indicating significant difference in the firm's compliance with the contract terms, and rejection of the null hypothesis (Table 4). Farmers training on improved cassava production practices received the highest mean rank (6.15), suggesting outgrowers rated the firm compliance with this contract obligation most favorably. This was followed deducting farm input costs at harvest time (mean rank = 6.10), providing mechanical operations based on farmers' needs at reasonable fees (mean rank = 6.10), and monitoring farm operations and providing agronomic support (6.10). Other terms, such as providing agronomic support or experts for best practices (6.06) and provision of information on improved cassava production practices (6.04), also scored relatively high.

On the other hand, such obligations as the timely supply of inputs (5.84), prompt payment for produce delivered (5.86), and supply of agreed quantity of farm inputs (5.79) were least ranked. The post-hoc test (chi-square = 68.6; $p < 0.05$), revealed by the superscripts 'a' and 'b', shows that the only significant difference in the firm compliance with contractual obligations was between farmer training



on improved practices (the highest rated with superscript 'a') and the supply / delivery of quality farm inputs to farmers (the least rated with superscript 'b').

Table 4: Friedman's Test of Difference among Contract Terms Complied with by Agbeyewa Agro firm

Contract terms	Mean rank*
Training of farmers on improved cassava production practice	6.15 ^a
Deduct farm inputs cost at harvest time	6.10 ^{ab}
Provide mechanical operations (ploughing, harrowing and ridging) based on farmers' needs at a reasonable fee	6.10 ^{ab}
Monitor farm operations and provide agronomic support	6.10 ^{ab}
Provide agronomic support or experts for best practices, field activities, and crop management techniques	6.06 ^{ab}
Provision of information on improved cassava production practices	6.04 ^{ab}
Purchase of produce at agreed price	6.01 ^{ab}
Supply/delivery of quality farm inputs	5.90 ^{ab}
Prompt payment for produce delivered	5.86 ^{ab}
Timely supply of inputs (chemicals, improved cassava stem)	5.84 ^{ab}
Supply of agreed quantity of farm inputs	5.79 ^b

Chi-square = 68.67; df = 10; $p \leq 0.05$

***Mean ranks with same superscript are not statistically/significantly different.**

CONCLUSION AND RECOMMENDATIONS

The study concluded that the private-sector led cassava out-growers' scheme reveals a generally positive performance in firm compliance with contractual obligations, a fact confirmed by both the outgrowers and firm staff. Significant difference was reported between highlighting the firm strengths in capacity-building and pointing to relative weaknesses in timely and adequate input supply. Despite these strengths, operational challenges were reported on both the firm and outgrowers' perspectives. On the part of the firm, these included delayed input delivery, irregular extension visits, inadequate mechanization, and delayed harvesting, which affect farmers' timeliness and cash flow. From the outgrowers perspective, issues such as communication barriers, trust deficits, geographical dispersion, and inconsistent farmer compliance further complicate scheme coordination. Also the results indicate mutual commitment between the firm and smallholder farmers, fostering trust and productivity in a relatively new initiative. However, addressing the identified bottlenecks is essential for long-term sustainability of the scheme, enhanced farmer satisfaction, and scaling of the outgrower model.

Based on the findings, the following are priority areas the agro-firm should focus on.

- Improve its timely supply of inputs, in the right quality and quantity, to enhance farmers' productivity.
- Prompt harvesting of mature cassava tubers to sustain and improve trust with farmers.
- Maintain regular monitoring and evaluation of farmers to identify and address emerging challenges. This may require providing logistics for its outgrower managers (agents) to facilitate farmer outreach.
- To address the challenges of inadequate tractors for timely and prompt land preparation, the firm should consider hiring tractors, in addition to its tractors, during the planting season.
- To address the communication barrier, the company should embrace multilingual communication strategies to accommodate farmers with varying levels of literacy and cultural background. This could include using visual aids, demonstration farms, and radio messages in local dialects to disseminate critical information. In addition, the use of local extension officers or lead farmers who will act as the link between the company and outgrowers would also bridge communication gaps and add clarity to the messages.



- vi. Ensure contractual terms are clarified to farmers via platforms such as regular stakeholder meetings where farmers can raise concerns, receive information, and provide feedback. This will foster inclusivity, transparency and trust among farmers for the scheme.
- vii. To address irregular compliance with contractual obligations, the firm should introduce performance-based incentives where outgrowers that comply fully are rewarded such as preferential access to improved inputs, training, or financial bonuses.
- viii. The firm should leverage digital technologies such as mobile-based advisory services, SMS alerts, and web-based training modules to provide real-time information and support to farmers, especially for those in rural areas. This will mitigate the challenges associated with remoteness of farmers.

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